

06-26-00  
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

A  
JCS30 U.S. PTO  
09/603132  
06/23/00

Applicant(s): Brian A. Vaartstra et al.

150.00650102

DEVICE STRUCTURES INCLUDING RUTHENIUM SILICIDE DIFFUSION BARRIER LAYERS (As Amended)

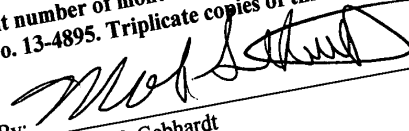
Assistant Commissioner for Patents  
ATTN: Box Patent Application  
Washington, D.C. 20231

We are transmitting the following documents along with this Transmittal Sheet (which is submitted in triplicate):  
☒ Copy of Utility Patent Application: Specification (19 pgs); Claims (38 claims on 6 pgs); 1 pg Abstract and 5 sheets of informal drawings, previously filed in parent application.  
☒ 5 Sheets of formal drawings.  
☒ Copy of a signed Declaration and Power of Attorney from parent application (2 pgs.).  
☒ A return postcard.  
☒ Other: Request for Filing A Divisional Patent Application Under Rule 1.53(b) (3 pgs.); Preliminary Amendment (4 pgs.); substitute Abstract (1 pg.).  
☒ A check in the amount of \$690 to cover the filing fee, which is calculated below:

| APPLICATION FILING FEE  |                            |   |                              |                      |              |
|---|----------------------------|---|------------------------------|----------------------|--------------|
|   | Number of Claims Filed (1) | Claims Included in Basic Filing Fee (2) | Number of Extra Claims (1-2) | Cost per Extra Claim | Fee Required |
| Total Claims  | 12                         | -20 =                                   | 0                            | x \$18 =             | 0            |
| Independent Claims  | 3                          | -3 =                                    | 0                            | x \$78 =             | 0            |
| One or More Multiple Dependent Claims Presented? If Yes, Enter \$260 Here → |                            |   |                              |                      | 0            |
| Enter Basic Filing Fee (Utility Patent-\$690/Design Patent-\$310) Here →    |                            |   |                              |                      | \$690        |
| Total Application Filing Fee  |                            |   |                              |                      | \$690        |

Please consider this a PETITION FOR EXTENSION OF TIME for a sufficient number of months to enter these papers and please charge any additional fees or credit overpayment to Deposit Account No. 13-4895. Triplicate copies of this sheet are enclosed.

MUETING, RAASCH & GEBHARDT, P.A.  
P.O. Box 581415, Minneapolis, MN 55458 (612-305-1220)

By:   
Name: Mark J. Gebhardt  
Reg. No.: 35,518  
Direct Dial: 612-305-1216  
Facsimile: 612-305-1228

CERTIFICATE UNDER 37 CFR §1.10:  
"Express Mail" mailing label number: EL518337463US

I hereby certify that this paper or fee is being deposited with the United States Postal Service "Express Mail Post Office to Address service under 37 CFR §1.10 on the date indicated above and is addressed to the Assistant Commissioner for Patents, ATTN: Box Patent Application, Washington, D.C. 20231.

By:   
Name: Anne M. Richards  
(LARGE ENTITY TRANSMITTAL UNDER RULE 1.10)

Date of Deposit: June 23, 2000

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

|               |                            |          |                    |                  |
|---------------|----------------------------|----------|--------------------|------------------|
| Docket Number | Anticipated Classification |          | Prior Application  |                  |
| 150.00650102  | Class                      | Subclass | Examiner<br>G. Lee | Art Unit<br>2825 |

**REQUEST FOR FILING A DIVISIONAL PATENT APPLICATION  
UNDER RULE 1.53(b)**

Assistant Commissioner for Patents  
Attn: Box Patent Application  
Washington, D.C. 20231

Sir:

This is a request for filing a divisional application under 37 CFR §1.53(b) of Serial No. 09/141,240, filed on August 27, 1998, entitled RUTHENIUM SILICIDE DIFFUSION BARRIER LAYERS AND METHODS OF FORMING SAME by the following inventor(s) (name, address, and citizenship):

**1.) Brian A. Vaartstra**  
3417 Braden Lane  
Nampa, ID 83686  
Citizenship: Canada

**2.) Eugene P. Marsh**  
1722 Picabo Ct.  
Boise, ID 83716  
Citizenship: U.S.A.

1. X Enclosed is a copy of the specification (including claims, abstract, and drawings) as filed in the prior application.
2.    Enclosed is a new specification (including claims and abstract). The entire disclosure of the prior application is considered as being part of the disclosure of the accompanying application and is hereby incorporated by reference.
3. X Enclosed is a copy of the Declaration and Power of Attorney filed in the prior application.
4.    Enclosed is a newly executed Declaration and Power of Attorney.
5. X Enclosed are formal drawings (5 sheets).
6. X Cancel in this application original claims 1-26 of the prior application before calculating the filing fee. (At least one original independent claim must be retained for filing purposes.)
7. X A preliminary amendment is enclosed (the filing fee calculation includes any new claims). (Claims added by this amendment have been properly numbered consecutively beginning with the number next following the highest numbered original claim in the prior application.)

Filed: Herewith

Title: DEVICE STRUCTURES INCLUDING RUTHENIUM SILICIDE DIFFUSION BARRIER LAYERS (As Amended)

8. ☒ The filing fee is calculated below:

| CLAIMS AS FILED                    |                 |       |                    |
|------------------------------------|-----------------|-------|--------------------|
| NUMBER FILED                       | NUMBER<br>EXTRA | RATE  | BASIC FEE<br>\$690 |
| Total Claims 12-20 =               | 0               | \$18  | 0                  |
| Independent Claims 3-3 =           | 0               | \$78  | 0                  |
| MULTIPLE DEPENDENT CLAIM PRESENTED |                 | \$260 | 0                  |
| FILING FEE:                        |                 |       | \$690              |

9. ☐ A Verified Statement that this filing is by a small entity (37 CFR §§1.9, 1.27, 1.28) is:  
☐ already filed in the parent application.  
☐ attached.
10. ☒ A check in the amount of \$690 is attached.
11. ☒ The Commissioner is hereby authorized to charge any additional fees as set forth in 37 CFR §1.16 to 1.18 which may be required by this paper or credit any overpayment to Account No. 13-4895.
12. ☐ This application is being filed by less than all of the inventors named in the prior application. Please delete the names of the following inventor(s) who are not inventors of the invention claimed in the present application:
13. ☒ Amend the specification by inserting as the first sentence on page 1, the following: This is a division of application Serial No. 09/141,240, filed August 27, 1998, (pending), which is incorporated herein by reference.--
14. ☐ Priority of foreign application Serial No. \_\_\_\_, filed on \_\_\_\_ in (country) \_\_\_\_ is claimed under 35 U.S.C. §119.
15. ☒ The prior application is assigned of record to Micron Technology, Inc.
16. ☒ The Power of Attorney in the prior application is to:

Mueting, Raasch & Gebhardt, P.A.  
P.O. Box 581415  
Minneapolis, MN 55458-1415

Filed: Herewith

Title: DEVICE STRUCTURES INCLUDING RUTHENIUM SILICIDE DIFFUSION BARRIER LAYERS (As Amended)

**Address all future communications to:**

MUETING, RAASCH & GEBHARDT, P.A.

P.O. Box 581415

Minneapolis, Minnesota 55458-1415

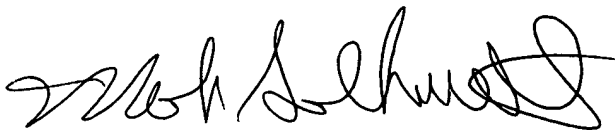
Attn: Mark J. Gebhardt

(Telephone: 612-305-1220)

(Facsimile: 612-305-1228)

17. X Substitute Abstract.

Date: 23 June 00



Mark J. Gebhardt

Reg. No. 35,518

Direct Dial (612)305-1216

"Express Mail" mailing label number EL518337463US

Date of Deposit June 23, 2000

I hereby certify that this paper and/or fee is/are being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 C.F.R. 1.10 on the date indicated above and is addressed to the Assistant Commissioner for Patents, Attn: Box Patent Application, Washington, D. C. 20231.

Anne M. Richards  
Name: Anne M. Richards